



An ISO 9001:2008  
Certified Company

## Analytical Division

Ganga Vishnu Bhawan, Tikrapara Main Road, Nr. Sanyukta Hospital, Bilaspur (C.G.) 495001.

Telefax : 07752-428668, Ph. : 78699-83152, Mobile : 98270-90233, 78699-83752 Visit : www.sqcindia.co.in, email : sqc\_india@rediffmail.com

## Certificate of Analysis

TC Format No.: QR/TC/02 Rev. 01 (17.02.2016)

<b>Name &amp; Address of the Customer:</b>		<b>Test Report No. :</b>	<b>201902021569</b>
<b>M/s Hind Energy &amp; Coal Benefication (India) Ltd., Sai Parisar, Shrikant Verma Marg, Bilaspur (CG)</b>		<b>Issue Date :</b>	<b>02-02-2019</b>
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Work Order :</b>	<b>Verbal</b>
<b>Sample Quantity</b>		<b>WO Date :</b>	<b>24-01-2019</b>
<b>Sample Date</b>		<b>Test Required :</b>	<b>as given below</b>
<b>Sample Collected by</b>	Submitted to Lab	<b>Date of Registration</b>	: 24-01-2019
<b>Sampling Protocol</b>	NM	<b>Date of Commencement of Testing</b>	: 24-01-2019
<b>Sample Identification:- " HINDADIH/ROM COAL , DATE:22-01-2019 "</b>		<b>Date of Completion of Testing</b>	: 28-01-2019
		<b>Sample Condition at Receipt</b>	: Packed
		<b>Page 1 of 1</b>	

Job ID: 201901241528

### TEST RESULT

Sr. No	Test performed	Unit of measurement	Results on ARB	Results on ADB	Results on DB	Method of Test
1.	Total Moisture	% by Mass	7.74	-	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Proximate Analysis						
2.	Moisture on ADB	% by Mass	-	5.90	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
3.	Ash Content		38.48	39.25	41.71	IS:1350 Pt.1 1984 (Reaffirmed 2013)
4.	Volatile Matter		23.93	24.41	25.94	IS:1350 Pt.1 1984 (Reaffirmed 2013)
5.	Fixed Carbon by Difference		29.85	30.44	32.35	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Gross Calorific Value						
6.	Gross Calorific Value by Bomb	Kcal/Kg	3940	4018	4270	IS:1350 Pt.2 1970 (Reaffirmed 2015)

Abb.: ARB- As Received Basis, ADB - Air Dry Basis, DB - Dry Basis

### Remarks:

- Sample Not drawn by us. Only Submitted Sample
- Identification Mark Given by Customer.
- Total Moisture analysis is based on ARB basis.
- Proximate & GCV analysis is based on ADB Basis.

*P. Wani*  
Prepared by



*Sanjay Gupta*  
SANJAY GUPTA  
Authorized Signatory  
(Quality Manager)

Note : This Report is subject to terms and conditions mentioned overleaf.





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## Certificate of Analysis

TC Format No.: QR/TC/02 Rev. 01 (17.02.2016)

<b>Name &amp; Address of the Customer:</b>		<b>Test Report No. :</b>	<b>201902021570</b>
<b>M/s Hind Energy &amp; Coal Benefication</b>		<b>Issue Date :</b>	<b>02-02-2019</b>
<b>(India) Ltd., Sai Parisar, Shrikant</b>		<b>Work Order :</b>	<b>Verbal</b>
<b>Verma Marg, Bilaspur (CG)</b>		<b>WO Date :</b>	<b>24-01-2019</b>
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Test Required :</b>	<b>as given below</b>
<b>Sample Quantity</b>	10 kg approx	<b>Date of Registration</b>	24-01-2019
<b>Sampling Date</b>	NM	<b>Date of Commencement of Testing</b>	24-01-2019
<b>Sample Collected by</b>	Submitted to Lab	<b>Date of Completion of Testing</b>	28-01-2019
<b>Sampling Protocol</b>	NM	<b>Sample Condition at Receipt</b>	Packed
<b>Sample Identification:- " HINDADIH/ WASH COAL , DATE:22-01-2019 "</b>			<b>Page 1 of 1</b>

**Job ID: 201901241529**

### TEST RESULT

Sr. No	Test performed	Unit of measurement	Results on ARB	Results on ADB	Results on DB	Method of Test
1.	Total Moisture	% by Mass	9.64	-	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Proximate Analysis						
2.	Moisture on ADB	% by Mass	-	6.18	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
3.	Ash Content		33.04	34.31	36.56	IS:1350 Pt.1 1984 (Reaffirmed 2013)
4.	Volatile Matter		25.48	26.46	28.20	IS:1350 Pt.1 1984 (Reaffirmed 2013)
5.	Fixed Carbon by Difference		31.84	33.05	35.24	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Gross Calorific Value						
6.	Gross Calorific Value by Bomb	Kcal/Kg	4162	4321	4606	IS:1350 Pt.2 1970 (Reaffirmed 2015)

Abbr.: ARB- As Received Basis, ADB- Air Dry Basis, DB- Dry Basis

### Remarks:

- Sample Not drawn by us. Only Submitted Sample
- Identification Mark Given by Customer.
- Total Moisture analysis is based on ARB basis.
- Proximate & GCV analysis is based on ADB Basis.

*[Signature]*  
Prepared by



*[Signature]*  
SANJAY GUPTA  
Authorized Signatory  
(Quality Manager)

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### Certificate of Analysis

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<b>Name &amp; Address of the Customer:</b>		<b>Test Report No. :</b>	<b>201902021571</b>
<b>M/s Hind Energy &amp; Coal Benefication</b>		<b>Issue Date :</b>	<b>02-02-2019</b>
<b>(India) Ltd., Sai Parisar, Shrikant</b>		<b>Work Order :</b>	<b>Verbal</b>
<b>Verma Marg, Bilaspur (CG)</b>		<b>WO Date :</b>	<b>24-01-2019</b>
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Test Required :</b>	<b>as given below</b>
<b>Sample Quantity</b>	10 kg approx	<b>Date of Registration</b>	: 24-01-2019
<b>Sampling Date</b>	NM	<b>Date of Commencement of Testing</b>	: 24-01-2019
<b>Sample Collected by</b>	Submitted to Lab	<b>Date of Completion of Testing</b>	: 28-01-2019
<b>Sampling Protocol</b>	NM	<b>Sample Condition at Receipt</b>	: Packed
<b>Sample Identification:- " HINDADIH/ REJECT COAL, DATE:22-01-2019 "</b>			<b>Page 1 of 1</b>

**Job ID: 201901241530**

### TEST RESULT

Sr. No	Test performed	Unit of measurement	Results on ARB	Results on ADB	Results on DB	Method of Test
1.	Total Moisture	% by Mass	4.12	-	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Proximate Analysis						
2.	Moisture on ADB	% by Mass	-	2.11	-	IS:1350 Pt.1 1984 (Reaffirmed 2013)
3.	Ash Content		71.83	73.33	74.91	IS:1350 Pt.1 1984 (Reaffirmed 2013)
4.	Volatile Matter		13.02	13.29	13.58	IS:1350 Pt.1 1984 (Reaffirmed 2013)
5.	Fixed Carbon by Difference		11.03	11.27	11.51	IS:1350 Pt.1 1984 (Reaffirmed 2013)
Gross Calorific Value						
6.	Gross Calorific Value by Bomb	Kcal/Kg	1287	1314	1342	IS:1350 Pt.2 1970 (Reaffirmed 2015)

Abbrev: ARB- As Received Basis, ADB - Air Dry Basis, DB - Dry Basis

#### Remarks:

1. Sample Not drawn by us. Only Submitted Sample
2. Identification Mark Given by Customer.
3. Total Moisture analysis is based on ARB basis.
4. Proximate & GCV analysis is based on ADB Basis.

Prepared by



**SANJAY GUPTA**  
Authorized Signatory  
(Quality Manager)

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### Certificate of Analysis

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<b>Name &amp; Address of the Customer:</b> <b>M/s Hind Energy &amp; Coal Benefication</b> <b>(I) Ltd.,</b> <b>Hindadih(CG)</b>		<b>Test Report No.</b> : 201902161702
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Issue Date</b> : 16-02-2019
<b>Sample Quantity</b> : 10 kg Approx.		<b>Work Order</b> : Telephonic
<b>Sampling Date</b> : NM		<b>WO Date</b> : 24-01-2019
<b>Sample Collected by</b> : Submitted Sample		<b>Test Required</b> : as given below
<b>Sampling Protocol</b> : NM		<b>Date of Registration</b> : 24-01-2019
<b>Sample Identification:</b> " HINDADIH/ ROM COAL/DATE:22-01-2019 "		<b>Date of Commencement of Testing</b> : 24-01-2019
		<b>Date of Completion of Testing</b> : 16-02-2019
		<b>Sample Condition at Receipt</b> : Found OK

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Job ID: 201901241528

### TEST RESULT

Sr.No.	Test Performed	Unit of Measurement	Results	Test of Method
1.	Arsenic (as As)	% by mass	<0.001	By AAS
2.	Chromium (as Cr)	% by mass	0.0038	By AAS
3.	Lead (as Pb)	% by mass	0.0036	By AAS
4.	Mercury (as Hg)	% by mass	<0.001	By AAS

Abb.: NM – Not Mention

#### Remarks:

1. Sample is not drawn by us. The results are applicable only to the submitted sample.
2. Identification Mark Given by Customer.
3. Analysis on As Received Basis by Our OSL\*.
4. \* Out Source Lab.

Prepared by



PRABHAT TIWARI  
Authorized Signatory  
(Dy. Tech.Manager)

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<b>Name &amp; Address of the Customer:</b> <b>M/s Hind Energy &amp; Coal Benefication</b> <b>(I) Ltd.,</b> <b>Hindadih(CG)</b>		<b>Test Report No.</b> : 201902161703
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Issue Date</b> : 16-02-2019
<b>Sample Quantity</b> : 10 kg Approx.		<b>Work Order</b> : Telephonic
<b>Sampling Date</b> : NM		<b>WO Date</b> : 24-01-2019
<b>Sample Collected by</b> : Submitted Sample		<b>Test Required</b> : as given below
<b>Sampling Protocol</b> : NM		<b>Date of Registration</b> : 24-01-2019
<b>Sample Identification:</b> " HINDADIH/ WASH COAL/DATE:22-01-2019 "		<b>Date of Commencement of Testing</b> : 24-01-2019
		<b>Date of Completion of Testing</b> : 16-02-2019
		<b>Sample Condition at Receipt</b> : Found OK
		Page 1 of 1

Job ID: 201901241529

### TEST RESULT

Sr.No.	Test Performed	Unit of Measurement	Results	Test of Method
1.	Arsenic (as As)	% by mass	<0.001	By AAS
2.	Chromium (as Cr)	% by mass	0.0021	By AAS
3.	Lead (as Pb)	% by mass	0.0033	By AAS
4.	Mercury (as Hg)	% by mass	<0.001	By AAS

Abb.: NM – Not Mention

#### Remarks:

1. Sample is not drawn by us. The results are applicable only to the submitted sample.
2. Identification Mark Given by Customer.
3. Analysis on As Received Basis by Our OSL\*.
4. \* Out Source Lab.

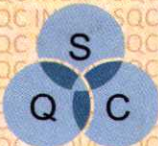
Prepared by



PRABHAT TIWARI  
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(Dy. Tech.Manager)

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<b>Name &amp; Address of the Customer:</b> <b>M/s Hind Energy &amp; Coal Benefication</b> <b>(I) Ltd.,</b> <b>Hindadih(CG)</b>		<b>Test Report No.</b> : 201902161704
<b>Nature of Sample : Coal Sample (as Described by customer)</b>		<b>Issue Date</b> : 16-02-2019
<b>Sample Quantity</b> : 10 kg Approx.		<b>Work Order</b> : Telephonic
<b>Sampling Date</b> : NM		<b>WO Date</b> : 24-01-2019
<b>Sample Collected by</b> : Submitted Sample		<b>Test Required</b> : as given below
<b>Sampling Protocol</b> : NM		<b>Date of Registration</b> : 24-01-2019
<b>Sample Identification:</b> " HINDADIH/ REJECT COAL/DATE:22-01-2019 "		<b>Date of Commencement of Testing</b> : 24-01-2019
		<b>Date of Completion of Testing</b> : 16-02-2019
		<b>Sample Condition at Receipt</b> : Found OK
		<b>Page 1 of 1</b>

**Job ID: 201901241530**

### TEST RESULT

Sr.No.	Test Performed	Unit of Measurement	Results	Test of Method
1.	Arsenic (as As)	% by mass	<0.001	By AAS
2.	Chromium (as Cr)	% by mass	0.0024	By AAS
3.	Lead (as Pb)	% by mass	0.0048	By AAS
4.	Mercury (as Hg)	% by mass	<0.001	By AAS

Abbr.: NM – Not Mention

#### Remarks:

1. Sample is not drawn by us. The results are applicable only to the submitted sample.
2. Identification Mark Given by Customer.
3. Analysis on As Received Basis by Our OSL\*.
4. \* Out Source Lab.

Prepared by



PRABHAT TIWARI  
Authorized Signatory  
(Dy. Tech. Manager)

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